

## ABSTRACT

An electromagnetic actuator includes a stator assembly mounted to a center pole formed of material having high magnetic permeability and functions as a return path for the magnetic field generated when current is passed through coils in the stator assembly.

5 When current is applied to one or more coils within the stator assembly, a magnetic field is generated that interacts with a magnetic field generated by one or more magnets disposed within the armature assembly and causes the armature to move relative to the center pole thus, for example, opening or closing a valve.